UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,142	04/15/2004	Deanna Lynn Quigg Brown	AUS920040197US1	7822

35525 7590 03/11/2008

IBM CORP (YA)
C/O YEE & ASSOCIATES PC
P.O. BOX 802333
DALLAS, TX 75380

EXAMINER	
TORRES, JOSEPH D	
ART UNIT	PAPER NUMBER
2112	

NOTIFICATION DATE	DELIVERY MODE
03/11/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptonotifs@yeeiplaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/825,142	BROWN ET AL.	
	Examiner	Art Unit	
	Joseph D. Torres	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 2, 6-10 and 14 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The language in claims 2, 6-10 and 14 is descriptive in nature describing the structure of an abstract packet data structure. Claims 2, 6-10 and 14 fail to recite any step that further limits the method of claim 1.

As per claim 2: claim 2 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1, claim 2 instead recites attributes of a data structure and introduces language suggesting intended use of the recited data structures.

As per claim 6, claim 6 only recites attributes of a data structure (structures "the first flag used by the selectively verifying step is unset") and introduces language suggesting intended use of the recited data. Claim 6 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1.

As per claim 7, claim 7 only recites attributes of a data structure ("the first flag used by the selectively verifying step is set") and introduces language suggesting intended use of the recited data. Claim 7 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1.

As per claim 8, claim 8 only recites attributes of a data structure ("the first flag used by the selectively verifying step is unset") and introduces language suggesting intended use of the recited data. Claim 8 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1.

As per claim 9, claim 9 only recites attributes of a data structure ("the first flag used by the selectively verifying step is unset and the second flag used by the selectively verifying step is unset") and introduces language suggesting intended use of the recited data. Claim 9 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1.

As per claim 10, claim 10 only recites attributes of a data structure ("the first flag used by the selectively verifying step is unset and the second flag used by the selectively verifying step is set") and introduces language suggesting intended use of the recited data. Claim 10 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1.

As per claim 14: claim 14 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1, claim 14 instead recites attributes of a data structure.

Claims 16, 20-25 and 28 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The

language in claims 16, 20-25 and 28 is descriptive in nature describing the structure of an abstract packet data structure. Claims 16, 20-25 and 28 fail to recite any structural element that further limits the apparatus of claim 15.

As per claim 16: claim 16 does not recite any limitation that can be regarded as a structural element or structural interconnection further limiting the data processing system of claim 15, claim 16 instead recites attributes of a data structure and introduces language suggesting intended use of the recited data structures.

As per claim 20, claim 20 does not recite any limitation that can be regarded as a structural element or structural interconnection further limiting the data processing system of claim 15, claim 20 instead recites attributes of a data structure for intended use in a method for intended us in an apparatus. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function, because apparatus claims cover what a device is, not what a device does (Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990)). Thus, if a prior art structure is capable of performing the intended use as recited in the preamble, or elsewhere in a claim, then it meets the claim.

As per claim 21, claim 21 does not recite any limitation that can be regarded as a structural element or structural interconnection further limiting the data processing system of claim 15, claim 21 instead recites attributes of a data structure for intended use in a method for intended us in an apparatus.

As per claim 22, claim 22 does not recite any limitation that can be regarded as a structural element or structural interconnection further limiting the data processing system of claim 15, claim 22 instead recites attributes of a data structure for intended use in a method for intended us in an apparatus.

As per claim 23, claim 23 does not recite any limitation that can be regarded as a structural element or 23 instead recites attributes of a data structure for intended use in a method for intended us in an apparatus.

As per claim 24, claim 24 does not recite any limitation that can be regarded as a structural element or structural interconnection further limiting the data processing system of claim 15, claim 24 instead recites attributes of a data structure for intended use in a method for intended us in an apparatus.

As per claim 25: claim 25 recites a step/function with intended use in conjunction with some structural elements. A step/function cannot be construed as a limitation to a device/system. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function, because apparatus claims cover what a device is, not what a device does (Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990)). Thus, if a prior art structure is capable of performing the intended use as recited in the preamble, or elsewhere in a claim, then it meets the claim.

As per claim 28: claim 28 does not recite any limitation that can be regarded as a structural element or structural interconnection further limiting the method of claim 1, claim 14 instead recites attributes of a data structure.

Claims 30 and 34-38 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The language in claims 31 and 34-38 is descriptive in nature describing the structure of an abstract packet data structure. Claims 31 and 34-38 fail to recite any instruction that further limits the product/program/signal of claim 30.

As per claim 30: claim 30 does not recite any limitation that can be regarded as a instruction further limiting the method of the computer program product of claim 29, claim 30 instead recites attributes of a data structure and introduces language suggesting intended use of the recited data structures.

As per claim 34, claim 34 only recites attributes of a data structure ("the first flag used by the second instructions is unset") and introduces language suggesting intended use of the recited data. Claim 34 does not recite any limitation that can be regarded as an instruction further limiting the method of claim 29.

As per claim 35, claim 35 only recites attributes of a data structure ("the first flag used by the second instructions is set") and introduces language suggesting intended use of

the recited data. Claim 35 does not recite any limitation that can be regarded as an instruction further limiting the method of claim 29.

As per claim 36, claim 36 only recites attributes of a data structure ("the first flag the second instructions is unset") and introduces language suggesting intended use of the recited data. Claim 36 does not recite any limitation that can be regarded as an instruction further limiting the method of claim 29.

As per claim 37, claim 37 only recites attributes of a data structure ("the first flag the second instructions is unset and the second flag used by the second instructions is unset") and introduces language suggesting intended use of the recited data. Claim 37 does not recite any limitation that can be regarded as an instruction further limiting the method of claim 29.

As per claim 38, claim 38 only recites attributes of a data structure ("the first flag used by the second instructions is unset and the second flag used by the second instructions is set") and introduces language suggesting intended use of the recited data. Claim 38 does not recite any limitation that can be regarded as an instruction further limiting the method of claim 29.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 6-10 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap

between the steps. See MPEP § 2172.01. The omitted steps are: any step connecting the data structures in claims 2, 6-10 and 14 to the steps of claim 1.

As per claim 2: claim 2 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1, claim 2 instead recites attributes of a data structure and introduces language suggesting intended use of the recited data structures.

As per claim 6, claim 6 only recites attributes of a data structure (structures "the first flag used by the selectively verifying step is unset") and introduces language suggesting intended use of the recited data. Claim 6 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1.

As per claim 7, claim 7 only recites attributes of a data structure ("the first flag used by the selectively verifying step is set") and introduces language suggesting intended use of the recited data. Claim 7 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1.

As per claim 8, claim 8 only recites attributes of a data structure ("the first flag used by the selectively verifying step is unset") and introduces language suggesting intended use of the recited data. Claim 8 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1.

As per claim 9, claim 9 only recites attributes of a data structure ("the first flag used by the selectively verifying step is unset and the second flag used by the selectively verifying step is unset") and introduces language suggesting intended use of the recited

data. Claim 9 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1.

As per claim 10, claim 10 only recites attributes of a data structure ("the first flag used by the selectively verifying step is unset and the second flag used by the selectively verifying step is set") and introduces language suggesting intended use of the recited data. Claim 10 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1.

As per claim 14: claim 14 does not recite any limitation that can be regarded as a step/action further limiting the method of claim 1, claim 14 instead recites attributes of a data structure.

Claims 16, 20-25 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: any structural elements connecting the data structures in claims 16, 20-25 and 28 to the steps of claim 15.

As per claim 16: claim 16 does not recite any limitation that can be regarded as a structural element or structural interconnection further limiting the data processing system of claim 15, claim 16 instead recites attributes of a data structure and introduces language suggesting intended use of the recited data structures.

As per claim 20, claim 20 does not recite any limitation that can be regarded as a structural element or structural interconnection further limiting the data processing system of claim 15, claim 20 instead recites attributes of a data structure for intended use in a method for intended us in an apparatus. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function, because apparatus claims cover what a device is, not what a device does (Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990)). Thus, if a prior art structure is capable of performing the intended use as recited in the preamble, or elsewhere in a claim, then it meets the claim.

As per claim 21, claim 21 does not recite any limitation that can be regarded as a structural element or structural interconnection further limiting the data processing system of claim 15, claim 21 instead recites attributes of a data structure for intended use in a method for intended us in an apparatus.

As per claim 22, claim 22 does not recite any limitation that can be regarded as a structural element or structural interconnection further limiting the data processing system of claim 15, claim 22 instead recites attributes of a data structure for intended use in a method for intended us in an apparatus.

As per claim 23, claim 23 does not recite any limitation that can be regarded as a structural element or 23 instead recites attributes of a data structure for intended use in a method for intended us in an apparatus.

As per claim 24, claim 24 does not recite any limitation that can be regarded as a structural element or structural interconnection further limiting the data processing system of claim 15, claim 24 instead recites attributes of a data structure for intended use in a method for intended us in an apparatus.

As per claim 25: claim 25 recites a step/function with intended use in conjunction with some structural elements. A step/function cannot be construed as a limitation to a device/system. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function, because apparatus claims cover what a device is, not what a device does (Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990)). Thus, if a prior art structure is capable of performing the intended use as recited in the preamble, or elsewhere in a claim, then it meets the claim.

As per claim 28: claim 28 does not recite any limitation that can be regarded as a structural element or structural interconnection further limiting the method of claim 1, claim 14 instead recites attributes of a data structure.

Claims 30 and 34-38 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted essential elements are: any instructins connecting the data structures in claims 31 and 34-38 to the product/program/signal of claim 30.

As per claim 30: claim 30 does not recite any limitation that can be regarded as a instruction further limiting the method of the computer program product of claim 29, claim 30 instead recites attributes of a data structure and introduces language suggesting intended use of the recited data structures.

As per claim 34, claim 34 only recites attributes of a data structure ("the first flag used by the second instructions is unset") and introduces language suggesting intended use of the recited data. Claim 34 does not recite any limitation that can be regarded as an instruction further limiting the method of claim 29.

As per claim 35, claim 35 only recites attributes of a data structure ("the first flag used by the second instructions is set") and introduces language suggesting intended use of the recited data. Claim 35 does not recite any limitation that can be regarded as an instruction further limiting the method of claim 29.

As per claim 36, claim 36 only recites attributes of a data structure ("the first flag the second instructions is unset") and introduces language suggesting intended use of the recited data. Claim 36 does not recite any limitation that can be regarded as an instruction further limiting the method of claim 29.

As per claim 37, claim 37 only recites attributes of a data structure ("the first flag the second instructions is unset and the second flag used by the second instructions is unset") and introduces language suggesting intended use of the recited data. Claim 37 does not recite any limitation that can be regarded as an instruction further limiting the method of claim 29.

As per claim 38, claim 38 only recites attributes of a data structure ("the first flag used by the second instructions is unset and the second flag used by the second instructions is set") and introduces language suggesting intended use of the recited data. Claim 38 does not recite any limitation that can be regarded as an instruction further limiting the method of claim 29.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 29-38 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A program and/or signal is a computer program product and neither signals nor programs fall into any of the statutory categories of invention; hence are non-statutory. Claim 29 only recites a computer program product and the limitations themselves are only directed to computer program instructions

Response to Arguments

Applicant's arguments filed 02/06/2008 have been fully considered but they are not persuasive.

The Applicant contends, "rewritten to overcome this objection. In particular, the claims have been amended such that the dependent claims further limit their respective

independent claim. For example, the amendment to Claim 2 further limits Claim 1 in that more detailed features/characteristics with respect to the first and second flags used by the selectively verifying step of Claim 1 are now recited in such claim. The amendment to Claim 16 further limits Claim 15 in that more detailed features/characteristics with respect to the first and flags used by the selectively verifying means of Claim 15 are now recited in such claim. The amendment to Claim 30 further limits 29 in that more detailed features with respect to the first and second flags used by the second instructions of Claim 29 are now recited in such claim. Claims 6-10, 14, 20-24, 28 and 34-38 similarly further limit independent Claims 1, 15 and 29, respectively, by recited further limiting features/characteristics with respect to the first flag that is used by the selectively verifying step, selectively verifying means, and the second instructions, respectively. It is also believed the inclusion of Claim 25 is this list of objected claims is a typographical error, as related Claims 11 was not similarly objected to, and that the inclusion of Claim 31 was intended to instead be Claim 30 due to Claim 30 being related to objected-to Claims 2 and 16".

The Examiner disagrees and asserts that the Examiner has addressed why newly amended language does not overcome the prior rejections in detail in the section entitled "Claim Objections", above.

The Applicant contends, "With respect to Claims 2, 6-l0 and 14, the Examiner states such claims are incomplete for omitting essential steps such as any step connecting the data structures in Claims 2, 6-10 and 14 to the steps of Claim 1. For similar reasons to

those described above with respect to the objection to these claims, Applicants have amended such claims to directly tie-in such claims with the selectively identifying step recited in Claim 1, and thus there is a direct linkage between these Claims 2, 6-10 and 14 and independent Claim 1. With respect to Claims 16, 20-25 and 28, the Examiner states such claims are incomplete for omitting essential structural cooperative relationships such as any structural elements connecting the data structures in Claims 16, 20-25 and 28 to the steps (sic) of Claim 15. For similar reasons to those described above with respect to the objection to these claims, Applicants have amended such claims to directly fie-in such claims with the selectively identifying means recited in Claim 15, and thus there is a direct structural relationship between these Claims 16, 20-25 and 28 and independent Claim 15. With respect to Claims 30 and 34-38, the Examiner states such claims are incomplete for omitting essential elements such as any instructions connecting the data structures in Claims 16, 20-25 and 28 to the product/program/signal of Claim 30 (sic). For similar reasons to those described above with respect to the objection to these claims, Applicants have amended such claims to directly fie-in such claims with the second instructions for selectively identifying that is recited in Claim 29, and thus there is a direct linkage between these Claims 30 and 34-38 and independent Claim 29".

The Examiner disagrees and asserts that the Examiner has addressed why newly amended language does not overcome the prior rejections in detail in the section entitled "Claim Rejections - 35 USC § 112", above.

The Applicant contends, "Applicants have amended Claim 29 in accordance with the Specification description on page 30 regarding a recordable-type medium, in order to overcome the Examiner's concerns regarding programs/signals, and such claim is now in a form expressly acknowledged as being allowable per the USPTO's Interim Guidelines for statutory subject matter1".
The Examiner disagrees and asserts that claim 29 still only recites a computer program product and the limitations themselves are only directed to computer program instructions.

The Applicant contends, "Because the cited reference describes one partition must wait on the other to complete transmission, there is no Maezawa teaching of such inter-partition transmission/receipt of a data packet, as per the features of Claim 1".
The Examiner disagrees and asserts Figure 1 explicitly teaches inter-partition devices Host Computer 1 and memory Control unit 6 disposed to communicate directly to each other via high and medium capacity lines 20 and 21 to provide Host computer direct access to main memory for Host Computer 1. Figurer 1 in Maezawa also teaches a Switching device 7 for providing communication to other devices external to Host computer 1 and its own main memory. The internal direct connections between a host computer and its own main memory is an inter-partition network. Col. 8, lines 41-50 make clear that the switching device 7 can be used to create virtual connections to any device on the network including main memory Control unit 6 for Host computer 1 to create an inter-partition virtual network. That is, the inter-partition virtual network

comprising main memory Control unit 6 and Host computer 1 is disposed to communicate directly or virtually via switching device 7 in order to receive data packets at a first partition Host computer 1 in the interpartition virtual network of Figure 3 from a second partition memory Control unit 6 in the interpartition virtual network of Figure 3 in the logical partitioned data processing system of Figure 3.

The Applicant contends, "claimed feature. Applicants urge two-fold error in such assertion. First, both references describe use of but a single flag to perform their respective conditional processing, whereas per Claim 1 two flags are used together to determine whether to conditionally perform a particular processing step. Two separate/distinct teachings of use of a single flag does not teach or suggest use of two flags in combination to determine whether to conditionally perform a particular processing step, as claimed. Second, contrary to the Examiner's assertion, Lansing does not teach use of a flag to conditionally determine whether to verify a checksum. Instead, Lansing describes use of flag to conditionally determine whether to generate a checksum. The generation of a checksum is very different from the verification of a checksum (Specification page 2, lines 3-6). Thus, it is further urged that the Examiner has failed to properly establish a prima facie showing of obviousness due to these additional claimed features that are not taught or suggested by the cited references."

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "use of a flag to conditionally determine whether to verify a checksum") are not

recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

However, in the interest of advancing prosecution, the Examiner discusses actual claim language, "selectively verifying a checksum in a first partition in the logical partitioned data processing system for the data packet **based on** the state of the first flag and the state of the second flag" [Emphasis added].

The Examiner disagrees and asserts that the flags in Kondo and Lansing are two distinct flags, the flag in Kondo providing an indication of whether redundancy exits (Note: ti is well known that some protocols such as UDP do not require redundancy whereas TCP does; in a multi-protocol system such as the one in Maezawa this information is critical since checksum verification can only take place if redundancy exists) and the flag in Lansing indicates whether an error has been detected in a network device such as the switching device 7 in Maezawa used to forward data to an intended receiver). Col. 39, lines 62-67 in Kondo explicitly teaches performing a CRC check (i.e., checksum verification) responsive to the ECC flag. CRC generation is responsive to the CRC flag in Lansing and since the CRC check (i.e., checksum verification) in both Kondo and Maezawa (and implicitly in Lansing) is **based on** the presence of CRC, the CRC check (i.e., checksum verification) is also **based on** the CRC flag.

The Applicant contends, "Further with respect to Claim 2, such claim further defines the two flags of Claim 1 to be a 'no checksum flag' and a 'checksum good flag'. As can be seen, both flags pertain to checksums. In rejecting Claim 2, the Examiner cites Kondo's ECC flag as being equivalent to one of these claimed checksum flags. Applicants have amended Claim 2 to further emphasize that the two checksum-related flags pertain to a checksum status of (i) whether a checksum is actually included and (ii) whether a checksum has already been verified. It is urged that the Kondo ECC flag does not meet either of these claimed checksum status, and therefore Claims 2 is not obvious in view of the cited references".

Claim 2 recites data attributes of two data elements, but fail to recite a concrete limitation that can be regarded as a step/function of a method that concretely provide an additional limitation further limiting claim 1. Clam 2 is properly rejected under the same grounds as claim 1.

The Applicant contends, "Further with respect to Claim 3, such claim recites "verifying the checksum for the data packet if the first flag and the second flag are unset". In rejected Claim 3, the Examiner states that the Lansing/Kondo combination teaches this claimed feature since Lansing teaches verifying the CRC if CRC is present as indicated by the first CRC flag, and Kondo teaches verifying the checksum if there are no errors in the packet as indicated by a second ECC flag. For similar reasons to those previously described, and contrary to the Examiner's assertion, Lansing does not teach conditional verification of a CRC but instead teaches conditional generation of a CRC. Thus, it is

further urged that the Examiner has failed to properly establish a prima facie showing of obviousness with respect to Claim 3 due to these additional claimed features that are not taught or suggested by the cited references. Further with respect to Claim 4, such claim recites "skipping verification of the checksum if the first flag is set". In rejecting Claim 4, the Examiner states that the cited Lansing reference teaches such verification skipping step. For similar reasons to those previously described, and contrary to the Examiner's assertion, Lansing teaches skipping of CRC generation. Generation and verification operations with respect to CRC are very different types of operations, and a teaching of one does not teach or suggest the other. Thus, it is further urged that the Examiner has failed to properly establish a prima facie showing of obviousness with respect to Claim 4 due to these additional claimed features that are not taught or suggested by the cited references".

Claim I recites, "selectively verifying a checksum in a first partition in the logical partitioned data processing system for the data packet **based on** the state of the first flag and the state of the second flag" [Emphasis added].

The Examiner disagrees and asserts that the flags in Kondo and Lansing are two distinct flags, the flag in Kondo providing an indication of whether redundancy exits (Note: ti is well known that some protocols such as UDP do not require redundancy whereas TCP does; in a multi-protocol system such as the one in Maezawa this information is critical since checksum verification can only take place if redundancy exists) and the flag in Lansing indicates whether an error has been detected in a network device such as the switching device 7 in Maezawa used to forward data to an

intended receiver). Col. 39, lines 62-67 in Kondo explicitly teaches performing a CRC check (i.e., checksum verification) responsive to the ECC flag. CRC generation is responsive to the CRC flag in Lansing and since the CRC check (i.e., checksum verification) in both Kondo and Maezawa (and implicitly in Lansing) is **based on** the presence of CRC, the CRC check (i.e., checksum verification) is also **based on** the CRC flag.

The Applicant contends, "In rejecting Claim 5, the Examiner states Kondo teaches that skipping the checksum value occurs if there are errors in the packet as indicated by the second ECC flag. Applicants urge that Claim 5 does not recite any skipping that occurs based on whether there are errors. Instead, Claim 5 recites "skipping verification of the checksum for the data packet if the first flag is unset and the second flag is set" (emphasis added), which is a two-pronged condition that must be met to invoke the skipping step. Quite simply, the use of a single flag as described by Kondo does not teach or otherwise suggest the claimed two-pronged conditional processing step. Thus, it is further urged that the Examiner has failed to properly establish a prima facie showing of obviousness with respect to Claim 5 due to these additional claimed features that are not taught or suggested by the cited references".

The Examiner disagrees and asserts Step 905 in Figure 9 and claim 1 in Lansing teaches identifying a state of a first CRC flag used to indicate the presence of redundancy. The Examiner asserts that regardless of what the second flag is, if no

CRC is included a CRC cannot be performed, that is the CRC check will be skipped if the first flag is unset and the second flag is set since the is no CRC.

The Applicant contends, "In rejecting Claims 6-10, the Examiner provides a very high-level, broad-brushed approach in the analysis of the particular features recited in such claims, and states that the Lansing/Kondo reference teaches all features recited in all of Claims 6-10 since this combination is alleged to teach 'adaptive parameters' for allowing a sending station to notify a receiving station whether a transmitted packet has redundancy and errors".
Claims 6-10 recite data attributes of two data elements, but fail to recite a concrete limitation can be regarded as a step/function of a method that concretely provide an additional limitation further limiting claim 1. Clams 6-10 are properly rejected under the same grounds as claim 1.

The Examiner disagrees with the applicant and maintains all rejections of claims 1-39. All amendments and arguments by the applicant have been considered. It is the Examiner's conclusion that claims 1-39 are not patentably distinct or non-obvious over the prior art of record in view of the references as applied in the last office action, filed 11/07/2007. Therefore, the rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maezawa; Hirofumi et al. (US 6145024 A, hereafter referred to as Maezawa) in view of Kondo; Satoshi et al. (US 6618396 B1, hereafter referred to as Kondo) and Lansing, Shane P. et al. (US 20030058862 A1, hereafter referred to as Lansing).

35 U.S.C. 103(a) rejection of claims 1, 15, 29 and 39.

Maezawa teaches receiving a data packet at a first partition in the interpartition virtual network from a second partition in the interpartition virtual network in the logical partitioned data processing system (col. 3, lines 60-65, col. 12, lines 1-12 and Figure 1 in Maezawa clearly suggest receiving data packets at a first partition in the interpartition virtual network of Figure 3 from a second partition in the interpartition virtual network of

Figure 3 in the logical partitioned data processing system of Figure 3); and verifying a checksum in a first partition in the logical partitioned data processing system for the data packet (Figure 5 in Maezawa teaches that each packet has a CRC checksum used for verifying received data, which clearly suggests verifying a checksum in a receiving first partition in the logical partitioned data processing system for the data packet responsive to receiving the data packet).

Note: Figure 1 explicitly teaches inter-partition devices Host Computer 1 and memory Control unit 6 disposed to communicate directly to each other via high and medium capacity lines 20 and 21 to provide Host computer direct access to main memory for Host Computer 1. Figurer 1 in Maezawa also teaches a Switching device 7 for providing communication to other devices external to Host computer 1 and its own main memory. The internal direct connections between a host computer and its own main memory is an inter-partition network. Col. 8, lines 41-50 make clear that the switching device 7 can be used to create virtual connections to any device on the network including main memory Control unit 6 for Host computer 1 to create an inter-partition virtual network. That is, the inter-partition virtual network comprising main memory Control unit 6 and Host computer 1 is disposed to communicate directly or virtually via switching device 7 in order to receive data packets at a first partition Host computer 1 in the interpartition virtual network of Figure 3 from a second partition memory Control unit 6 in the interpartition virtual network of Figure 3 in the logical partitioned data processing system of Figure 3.

However Maezawa does not explicitly teach the specific use of **identifying a state of a first flag and a state of a second flag in the data packet**; and **selectively** verifying a checksum **based on the state of the first flag and the state of the second flag**. Kondo and Lansing, in an analogous art, teaches use of identifying a state of a first flag (Step 905 in Figure 9 and claim 1 in Lansing teaches identifying a state of a first CRC flag used to indicate the presence of redundancy) and a state of a second flag (col. 39, lines 55-67 in Kondo teaches a second ECC flag in a packet indicating whether error are present in the packet or not) in the data packet; and selectively verifying a checksum based on the state of the first flag (Steps 905-915 in Figure 9 of Lansing) and the state of the second flag (col. 39, lines 62-67 in Kondo teaches identifying/detecting the second ECC flag to selectively verify the CRC checksum). Note: the flags in Kondo and Lansing are two distinct flags, the flag in Kondo providing an indication of whether redundancy exits (Note: ti is well known that some protocols such as UDP do not require redundancy whereas TCP does; in a multi-protocol system such as the one in Maezawa this information is critical since checksum verification can only take place if redundancy exists) and the flag in Lansing indicates whether an error has been detected in a network device such as the switching device 7 in Maezawa used to forward data to an intended receiver). Col. 39, lines 62-67 in Kondo explicitly teaches performing a CRC check (i.e., checksum verification) responsive to the ECC flag. CRC generation is responsive to the CRC flag in Lansing and since the CRC check (i.e., checksum verification) in both Kondo and Maezawa (and implicitly in Lansing) is **based**

on the presence of CRC, the CRC check (i.e., checksum verification) is also **based on** the CRC flag.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Maezawa with the teachings of Kondo and Lansing by including use of identifying a state of a first flag and a state of a second flag in the data packet; and selectively verifying a checksum based on the state of the first flag and the state of the second flag. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that use of identifying a state of a first flag and a state of a second flag in the data packet; and selectively verifying a checksum based on the state of the first flag and the state of the second flag would have provided a flexible arrangement whereby the packet creator can decide whether CRC is needed (Abstract in Lansing) and would have provided flagging for erroneous data for use by system controllers (col. 35, lines 55-62 in Kondo).

35 U.S.C. 103(a) rejection of claims 2, 16 and 30.

Col. 39, lines 55-67 in Kondo teaches a second ECC flag in a packet indicating whether errors are present in the packet or not. Step 905 in Figure 9 and claim 1 in Lansing teaches identifying a state of a first CRC flag used to indicate the presence of redundancy.

In addition, claim 2 recites data attributes of two data elements, but fail to recite a concrete limitation that can be regarded as a step/function of a method that concretely

provide an additional limitation further limiting claim 1. Claim 2 is properly rejected under the same grounds as claim 1. The same applies to claims 16 and 30 with respect to claims 15 and 29.

35 U.S.C. 103(a) rejection of claims 3, 17 and 31.

Steps 905-915 in Figure 9 of Lansing teaches verifying the CRC, if CRC is present indicated by the first CRC flag and col. 39, lines 62-67 in Kondo teaches that verifying the checksum, if there are no errors in the packet indicated by the second ECC flag. Note: the flags in Kondo and Lansing are two distinct flags, the flag in Kondo providing an indication of whether redundancy exits (Note: ti is well known that some protocols such as UDP do not require redundancy whereas TCP does; in a multi-protocol system such as the one in Maezawa this information is critical since checksum verification can only take place if redundancy exists) and the flag in Lansing indicates whether an error has been detected in a network device such as the switching device 7 in Maezawa used to forward data to an intended receiver). Col. 39, lines 62-67 in Kondo explicitly teaches performing a CRC check (i.e., checksum verification) responsive to the ECC flag. CRC generation is responsive to the CRC flag in Lansing and since the CRC check (i.e., checksum verification) in both Kondo and Maezawa (and implicitly in Lansing) is **based on** the presence of CRC, the CRC check (i.e., checksum verification) is also **based on** the CRC flag.

35 U.S.C. 103(a) rejection of claims 4, 18 and 32.

Steps 905-915 in Figure 9 of Lansing teaches skipping the verification step, if no CRC is present indicated by the first CRC flag. Note: the flags in Kondo and Lansing are two distinct flags, the flag in Kondo providing an indication of whether redundancy exits (Note: ti is well known that some protocols such as UDP do not require redundancy whereas TCP does; in a multi-protocol system such as the one in Maezawa this information is critical since checksum verification can only take place if redundancy exists) and the flag in Lansing indicates whether an error has been detected in a network device such as the switching device 7 in Maezawa used to forward data to an intended receiver). Col. 39, lines 62-67 in Kondo explicitly teaches performing a CRC check (i.e., checksum verification) responsive to the ECC flag. CRC generation is responsive to the CRC flag in Lansing and since the CRC check (i.e., checksum verification) in both Kondo and Maezawa (and implicitly in Lansing) is **based on** the presence of CRC, the CRC check (i.e., checksum verification) is also **based on** the CRC flag.

35 U.S.C. 103(a) rejection of claims 5, 19 and 33.

Col. 39, lines 62-67 in Kondo teaches that skipping the checksum verification, if there are errors in the packet indicated by the second ECC flag.

Note: Step 905 in Figure 9 and claim 1 in Lansing teaches identifying a state of a first CRC flag used to indicate the presence of redundancy. The Examiner asserts that regardless of what the second flag is, if no CRC is included a CRC cannot be

performed, that is the CRC check will be skipped if the first flag is unset and the second flag is set since the is no CRC.

35 U.S.C. 103(a) rejection of claims 6-10, 14, 20-24, 28 and 34-38.

Kondo and Lansing teach adaptive parameters (Steps 905-915 in Figure 9 of Lansing teaches a first CRC flag used to indicate the presence of redundancy; Col. 39, lines 62-67 in Kondo teaches a second ECC flag in a packet indicating whether errors are present) for allowing a sending station to notify a receiving station whether a transmitted packet has redundancy for use in verifying the packet based on a first CRC flag and whether the packet has errors so that receiving controller can imitate error handling based on a second ECC flag intended for use in the particular embodiments of claims 6-10, 14, 20-25, 28 and 34-38.

In addition, claims 6-10 and 14 recite data attributes of two data elements, but fail to recite a concrete limitation that can be regarded as a step/function of a method that concretely provide an additional limitation further limiting claim 1. Claims 6-10 and 14 are properly rejected under the same grounds as claim 1. The same applies to claims 20-24, 28 and 34-38 with respect to claims 15 and 29.

35 U.S.C. 103(a) rejection of claims 11 and 25.

Page 3 of the Applicant's specification teaches that virtual adapters are used to send packets to each other in an interpartition virtual network. Multiplexer channel devices 3

and 10 in figure 1 of Maezawa are examples of virtual adapters used for interpartition communications (see Abstract in Maezawa).

35 U.S.C. 103(a) rejection of claims 12 and 26.

Maezawa teaches a first generating means for generating a new data packet for a target destination (interface driver 33 in Figure 2 of Maezawa); second generating means for generating the checksum for the new data packet if the new data packet is to be sent outside of the interpartition virtual network by a physical network adapter (external interface protocol control circuit 37 in Figure 2 of Maezawa); and sending means for sending the new data packet to the target destination (multiplex/distribution control circuit 36 in Figure 2 of Maezawa).

35 U.S.C. 103(a) rejection of claims 13 and 27.

Maezawa teaches means for sending the new data packet to the target destination using one of the physical network adapter (external interface protocol control circuit 37 in Figure 2 of Maezawa) or a virtual network adapter (link connection control circuit 38 in Figure 2 of Maezawa).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on (571) 272-6962. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joseph D. Torres
Primary Examiner
Art Unit 2112

/Joseph D. Torres/
Primary Examiner, Art Unit 2112